



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/796,521	03/08/2004	James T. Burg	02-1704 (370108-00013)	1921

8840 7590 01/16/2007
INTELLECTUAL PROPERTY
ALCOA TECHNICAL CENTER, BUILDING C
100 TECHNICAL DRIVE
ALCOA CENTER, PA 15069-0001

EXAMINER

SMITH, NICHOLAS A

ART UNIT	PAPER NUMBER
----------	--------------

1742

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/796,521

Applicant(s)

BURG ET AL.

Examiner

Nicholas A. Smith

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-12 is/are allowed.
- 6) ☒ Claim(s) 1 and 4 is/are rejected.
- 7) ☒ Claim(s) 2,3,5 and 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/8/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

1. Claims 1-12 are ready for examination.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Bates et al. (US 6,447,667).
4. Bates et al. discloses a method of protecting inert anode assemblies (Fig. 1, portions attached to **26**) from thermal shock during operation in a metal producing cell (abstract). Bates et al. discloses operating an electrolysis cell having a plurality of inert anode assemblies (Fig. 1, portions attached to **26**) at over 850°C in a molten cryolite bath (col. 2, lines 23-28, col. 3 lines 4-10) where all of the anode assemblies are shielded by a circumscribed heat radiation shield (Fig. 1, **14**). Bates et al. discloses inserting a new shielded anode assembly to other anode assemblies during start up (col. 4, lines 41-45). Bates et al. inherently discloses a step of withdrawing a shielded anode assembly adjacent to other shielded assemblies in that inert anodes do need to be replaced over time from corrosion (col. 1, lines 59-62). During this inherent withdraw, other assemblies would inherently be exposed to lower ambient temperatures. Bates et al. discloses a radiation shield (**14**) that does not disintegrate in

Art Unit: 1742

contact with cryolite fumes and remains intact in place above the molten bath (Fig. 1).

Such a heat shield would inherently prevent a temperature drop within its circumscribed assembly of under about 30°C.

5. In regards to claim 4, such a heat shield would inherently prevent a temperature drop within its circumscribed assembly of under about 20°C.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. De Nora et al. (US 6,783,656) pertains to aluminum production with multiple anode assemblies.

Allowable Subject Matter

7. Claims 2-3 and 5-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter: Claims 2 and 6 specify the composition of a heat shield that prior art does not suggest, disclose or teach in combination with the claimed method of protecting inert anode assemblies. Claims 3 and 5 specify the timing of a change out cycle of an inert anode assembly wherein prior art does not suggest, disclose or teach the timing of such a change out cycle of an inert anode assembly in combination with the claimed method of protecting inert anode assemblies.

8. Claims 7-12 are allowed. The following is an examiner's statement of reasons for allowance: Claim 7 specify that the heat radiation shield is attached to all of the anode assemblies, acts as a radiation shield, and remains intact and in place above the

Art Unit: 1742

molten electrolyte bath in combination with the claimed method of replacing anode assemblies.

9. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicholas A. Smith whose telephone number is (571)-272-8760. The examiner can normally be reached on 8:30 AM to 5:00 PM, Monday through Friday.

11. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571)-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1742

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NAS


ROY KING
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700